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10/669,718	09/25/2003	Kouji Yokouchi	2091-0297P	6370
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BIRCH STEWART KOLASCH & BIRCH				EXAMINER
PO BOX 747				PATEL, JAYESH A
FALLS CHURCH, VA 22040-0747			ART UNIT	PAPER NUMBER
			2624	
NOTIFICATION DATE	DELIVERY MODE			
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/669,718	Applicant(s) YOKOUCHI, KOUJI
	Examiner JAYESH A. PATEL	Art Unit 2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 August 2008.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) 4,10,16 and 22 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-3,5-9,11-15,17-21,23 and 24 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 25 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No./Mail Date 07/08/2008

4) Interview Summary (PTO-413)
 Paper No./Mail Date. _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3,5-9,11-15, 17-21 and 23-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 1,7 13 and 19 contains limitation “**a second threshold**” value which is not supported by the current specifications. The specification on page 9 lines 19-26 describes only one threshold value and therefore it does not support the second threshold value. Dependent claims 2-3, 5-6, 8-10, 11-12, 14-15, 17-18, 20-21 and 23-24 depends directly or indirectly on the independent claims and therefore they are rejected under 35 U.S.C 112 first.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3 and 5-6 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example (**Claim 1 is a method which is not tied to another statutory category such as a particular apparatus.**)

Diamond v. Diehr, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

¹ *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

Art Unit: 2624

material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 7-9 and 11-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 7 defines an image processor [the means plus function language introduces the possibility that the apparatus is just a program as recited in the specification (see pages 4 and 14 where the image processing method performed in an image processor is a program as described in the specification, "an image processor may be implemented in software, hardware, or firmware")] embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed "an image processor" [or merely a program or software]

can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The Examiner suggests amending the claim to embody actual hardware components to the independent image processing claim to show that an actual image processor is being claimed instead of software. Any amendment to the claim should be commensurate with its corresponding disclosure.

Regarding claim 13, the limitations "separation means for dividing" in line 4, invoke 35 U.S.C. 112 6th paragraph.

Claims 13-15 and 17-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 13 defines a system [the different system components may be software which introduces the possibility that the system is just a program or software as is recited in the specification (see pages 4 and 14 where the image processing method of the system is a program as described in the specification, . Claim 19 also supports that the individual system components are program on the computer readable medium. The data source and the data output source also may be paper and therefore none of the system components are actual hardware components. The Examiner suggests amending the claim to embody actual hardware components to the independent system claim to show that an actual system is being claimed instead of software. Any amendment to the claim

should be commensurate with its corresponding disclosure. Dependent claims 14-15 and 17-18 are rejected as being dependent on claim 13.

Claims 4, 10, 16 and 22 are canceled by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-9, 11-15, 17-21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (JP 2000-222564) hereafter Yamaguchi as best understood by the examiner in view of the 112 rejections.

Regarding claim 1 Yamaguchi discloses the natural image and computer graphics region divided (**abstract steps 108 and 110**) in a postcard and corrects the natural image of the picture without altering the text (CG image) with the help of threshold operation (if the luminance value varies from a predetermined value (**pages 2 paras 0008, 0009**) and forming a composite picture (**abstract**)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3, 5-7,9, 11-13,15, 17-19,21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta (EP 0924648 A2) hereafter Ohta in view of Noyama et al. (US 5594850) hereafter Noyama and in further view of (JP 2000-222564) hereafter Yamaguchi as best understood by the examiner in view of the 112 rejections

1. Regarding Claim 1, Ohta discloses a method of performing image processing on an image synthesized from a natural image and a computer graphic (**CG**) image (**Fig 26 and Fig 27**). Ohta further discloses providing a specification (**of separating a composite image made up of user image and the template image i.e. natural and CG image**) of the first (**user image**) and second regions (**template image**) in said synthesized image in image synthesizer in fig 26, the first region comprising the natural image (**user image**); Ohta also discloses **separating** said synthesized image into a natural-image region (**User Image**) and a CG-image region (**template image**) at (**Fig 26 and Fig 27 Block 132**) wherein said separating includes removing (**separating the template and user images with the help of mask information will be removing the pixels designated as the part of template or CG image from the first region or the**

user image). Ohta also discloses designating and extracting (**cut out or partial image**) from not only a natural image but also an image (**synthesized image**) represented using a color palette (**specified color pixels**) at (**Paras 18-21 Page 3**). Ohta further discloses computing an image-processing parameter for said image processing, based on said natural-image region (**Block 133 Fig 27 and Page 2 Para 0010-0015 where the color correction parameter is decided for the user image or the natural image**); acquiring an intermediate image by performing said image processing on said synthesized image (**Fig 26 and Fig 27 Block 133 where the separating and color conversion of the synthesized image will obtain an intermediate images of the user image and the template images. This is seen in Fig 26 in the image synthesizer**), based on said image processing parameter; and acquiring a processed image by synthesizing said natural-image region contained in said intermediate image (**image after color conversion image at step 7 in fig 26**) and said CG-image region (**image after color conversion image at step 7 in fig 26**) contained in said synthesized image (**Fig 26 and Fig 27 Block 134**). Ohta discloses masking and designating pixels as seen in Fig 26 and 27, however is silent and does not recite determining a color of pixels in the second region; distinguishing each pixel in the first region, which is judged to have the same color as the color of pixels in the second region as being part of the CG-image.

Noyama discloses determining a color of pixels in the second region; distinguishing each pixel in the first region, which is judged to have the same

color as the color of pixels in the second region as being part of the CG-image at (Col 9 Lines 7-21 where the pixels in the region common (judged to have the same color) to the natural (first) region and the CG (second) regions are taken from the CG region (as being part of the CG region). Yamaguchi discloses the natural image and computer graphics region divided (abstract steps 108 and 110) in a postcard and corrects the natural image of the picture without altering the text (CG image) with the help of threshold operation (if the luminance value varies from a predetermined value (pages 2 paras 0008, 0009) and forming a composite picture (abstract). Noyama discloses that the processing is automatic and the need for the human operator is eliminated (analyzing color) which would bring erroneous results at (Col 5 Lines 24-30). Yamaguchi discloses correction only to the natural image to avoid unnecessary correction (disclosed in expert translation) saving the resources. Ohta, Noyama and Yamaguchi are from the same field of endeavor and are analogous art, therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the teachings of Yamaguchi and Noyama in the apparatus and method of Ohta for the above reasons.

2. Regarding claim 3, Ohta, Noyama and Yamaguchi discloses the method as set forth in claim 1. Ohta further discloses wherein said synthesized image is obtained by reading out synthesized image data from a storage medium in (Fig 1 Element 1, 11 and Page 6 Lines 20-42).

3. Regarding Claim 5, Ohta, Noyama and Yamaguchi discloses the method as set forth in claim 1. Ohta further discloses wherein said separated natural image and CG image are displayed in (**Fig 26 Element 6 and Col 8 Lines 22-28**). Noyama also discloses the images displayed in Fig 8. Yamaguchi also discloses the divided images displayed as seen in Figs 6.

4. Regarding Claim 6, Ohta, Noyama and Yamaguchi discloses the method as set forth in claim 1. Ohta further disclose wherein a maximum rectangular region that is inscribed in said natural-image region is set; and said image-processing parameter is computed based on an image within said maximum rectangular region at (**Fig 18 and Page 3 Lines 29 –31**). The rectangle circumscribes the extracted region from the natural image and the pixel data and the coordinate data (**color correction or image processing**) are produced based on the extracted data. Noyama also discloses the rectangular region 55 inscribing said natural image (**head of the person is seen in region 55**) is set as seen in Fig 8. Yamaguchi also discloses rectangle inscribed as seen in Fig 6b.

5. Claim 7 is a corresponding image processor Claim of Claim 1. See the explanation of Claim 1. Yamaguchi discloses the computer graphics image made of black colour in Fig 6b.

6. Claim 9 is a corresponding image processor Claim of Claim 3. See the explanation of Claim 3.

7. Claim 11 is a corresponding image processor Claim of Claim 5. See the explanation of Claim 5.

8. Claim 12 is a corresponding image processor Claim of Claim 6. See the explanation of Claim 6.

9. Claim 13 is a corresponding system Claim of a method of Claim 1.See the explanation of Claim 1.

10. Claim 15 is a corresponding system Claim of a method of Claim 3.See the explanation of Claim 3.

11. Claim 17 is a corresponding system Claim of a method of Claim 5.See the explanation of Claim 5.

12. Claim 18 is a corresponding system Claim of a method of Claim 6.See the explanation of Claim 6.

13. Claim 19 is a corresponding Computer readable storage device having recorded the program for causing the computer to execute the method of Claim 1. See the explanation of Claim 1.

14. Claim 21 is a corresponding Computer readable storage device having recorded the program for causing the computer to execute the method of Claim 3. See the explanation of Claim 3.

15. Claim 23 is a corresponding Computer readable storage device having recorded the program for causing the computer to execute the method of Claim 5. See the explanation of Claim 5.

16. Claim 24 is a corresponding Computer readable storage device having recorded the program for causing the computer to execute the method of Claim 6. See the explanation of Claim 6.

Claims 2,8,14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta, Noyama , Yamaguchi and in further view of Joshi et al (US 5982381) hereafter Joshi.

17. Regarding Claim 2, Ohta, Noyama and Yamaguchi discloses the method as

set forth in claim 1. Ohta, Noyama and Yamaguchi however does not disclose wherein a boundary portion between said natural-image region and CG-image region contained in said synthesized image is blurred and then said CG-image region in said synthesized image and said natural-image region in said intermediate image are synthesized.

Joshi discloses wherein a boundary portion between said natural-image region and CG-image region contained in said synthesized image is blurred and then said CG-image region in said synthesized image and said natural-image region in said intermediate image are synthesized at (**Col 1 Lines 19-45 and Col 5 Lines 54-60**). Joshi also discloses generating a distance mask using chamfering technique. Joshi also discloses the invention provides high calculation efficiency and fast response at (**Col 2 Lines 12-15**). Ohta, Noyama, Yamaguchi and Joshi are from the same field of endeavor and are analogous art, therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made, to use image blurring techniques as taught by Joshi in smoothing the boundary edges in the image processing method and apparatus of Ohta, Noyama and Yamaguchi for the above reasons.

18. Claim 8 is a corresponding Image processor performing a method of Claim 2. Therefore see the explanation of Claim 2.

19. Claim 14 is a system performing corresponding method of Claim 2. Therefore see the explanation of Claim 2.

20. Claim 20 is a Computer readable storage device performing a method of Claim 2. Therefore see the explanation of Claim 2.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAYESH A. PATEL whose telephone number is (571)270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/01/2008
/Jayesh A Patel/
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